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FEB 17 2000

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

February 17, 2000

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
The Portals
445 12th St. SW
Washington, D.C. 20554

Re: Written Ex Parte in CC Docket No. 98-121 and
CC Docket No. 98-56

Dear Ms. Salas:

This is to inform you that BellSouth Corporation made a written ex parte today by e-mail to Mr. John Stanley of the Common Carrier Bureau's Policy and Program Planning Division. That ex parte consists of documents BellSouth filed with the Louisiana Public Service Commission in LPSC Docket Number U-22252-C during the period between January 10 and February 7, 2000.. This information has been submitted in response to the staff's request.

Pursuant to Section 1.1206(b)(1) of the Commission's rules, I am filing two copies of this notice and that written ex parte presentation in both the dockets identified above. Please associate this notification with the record in both those proceedings.

Sincerely,

Kathleen B. Levitz

Kathleen B. Levitz

Attachments

cc: John Stanley

February 2, 2000

VIA FEDERAL EXPRESS

Ms. Susan Cowart
Louisiana Public Service
Commission
P. O. Box 91154
Baton Rouge, LA 70821

RE: LPSC Docket Number U-22252-C
Louisiana Public Service Commission, ex parte
In re: BellSouth Telecommunications, Inc.
Service Quality Performance Measurements

Dear Ms. Cowart:

Enclosed for filing is the original and one (1) copy of BellSouth's Supplemental Filing dated February 2, 2000 containing additional narrative explaining BellSouth's VSEEM III Remedy Impact Model Filing dated January 24, 2000. This supplemental filing also contains numbers that reflect consideration of the escalation of the financial remedies. The numbers in the January 24th filing did not take this escalation into account.

Also enclosed for filing is the original and one (1) copy of BellSouth's Corrected Louisiana Forecast. This filing corrects provisioning forecast data in BellSouth's December 1, 1999 filing. All other forecasting data in the December 1st filing remains accurate. This Corrected Forecast will not impact any party's calculation of its remedy impact model.

Additionally, I am including an extra copy of each filing which I ask that you please date stamp and return to me in the envelope provided.

Sincerely,

Victoria K. McHenry

VKM/as
Enclosures

cc: Official Service List (w/enc.) (via email, fax or Fed Ex)

195744

ASSUMPTIONS TO BE USED IN DEVELOPING ENFORCEMENT IMPACTS

(Usable for Parity measurements)

Disparity Level Definition

- Disparity level Better than ILEC corresponds to a CLEC favoritism. The ILEC mean is greater than the CLEC by .5 standard deviation. This is modeled by a Normal density with mean .5 and variance 1.
- Disparity level None corresponds to parity. There is no difference between the ILEC and CLEC means. This is modeled by a Normal density (bell curve) with mean 0 and variance 1.
- Disparity level Medium corresponds to a moderate level of disparity. The ILEC mean is less than the CLEC by .75 standard deviations. This is modeled by a Normal density with mean -.75 and variance 1.
- Disparity level Severe corresponds to a high level of disparity. The ILEC mean is less than the CLEC by 1.5 standard deviations. This is modeled by a Normal density with mean -1.5 and variance 1.

The following table gives the proportion of Z-scores one would expect to fall into certain ranges. These proportions correspond to the area under the appropriate normal density with the range.

Percent of all Z-scores that fall into the range

Disparity level	Range of Z-score				
	< -3.01	-3.01 to -2.34	-2.33 to -1.66	-1.65 to -1.04	>-1.04
Better than	0.02%	0.21%	1.35%	4.60%	93.82%
None	0.13%	0.86%	3.96%	9.97%	85.08%
Medium	1.19%	4.51%	12.70%	20.18%	61.41%
Severe	6.55%	13.77%	23.71%	23.69%	32.28%

Distribution of Disparity Levels Across Cells

The following 15 mixtures of the 4 disparity levels defined above were obtained using a "simplex centroid" design. This gives us a set of mixtures that will provide a representative sample of possible outcomes. The mixture distributions are arranged from the least amount of disparity to the greatest.

Percent of all cells (submetrics) at the disparity level

Distribution Number	Disparity Level			
	Better	None	Medium	Severe
1	100.00%	0.00%	0.00%	0.00%
2	50.00%	50.00%	0.00%	0.00%
3	0.00%	100.00%	0.00%	0.00%
4	50.00%	0.00%	50.00%	0.00%
5	33.33%	33.33%	33.33%	0.00%
6	33.33%	33.33%	0.00%	33.33%
7	0.00%	50.00%	50.00%	0.00%
8	25.00%	25.00%	25.00%	25.00%
9	50.00%	0.00%	0.00%	50.00%
10	33.33%	0.00%	33.33%	33.33%
11	0.00%	50.00%	0.00%	50.00%
12	0.00%	0.00%	100.00%	0.00%
13	0.00%	33.33%	33.33%	33.33%
14	0.00%	0.00%	50.00%	50.00%
15	0.00%	0.00%	0.00%	100.00%

Modeling Strategy

1. Determine the number of cells (submetrics)
   a. The measures that will be modeled will be those included in BellSouth's VSEEM III proposal. The parties will not consider in their modeling effort measures that are Tier II only.
   b. The levels of disaggregation will be what is included in BellSouth's most recent SQM. This will establish the submetrics for models that do not use the cell approach.
2. Determine the number of active cells
   a. It will be assumed that 80% of the submetrics are populated.
   b. Bellsouth will assume that there are 10 cells per submetric.
3. Where forecast data is utilized in the model, BellSouth's forecast for Louisiana for 2003 should be used.
4. It will be assumed that there are 50 active CLECs.
5. Each disparity distribution (1-15 above) determines the number of cells at each of the three disparity levels (e.g., if there are 100 cells and 80 of them are active, distribution 6 tells you that better than ILEC performance exists in 80*33.33% = 26.67 cells, parity exists in 80*33.33%= 26.67 cells, medium disparity exists in 80*0%= 0 cells, and severe disparity exists in 80*33.33% = 26.67 cells).
6. Use the disparity definitions to determine z-scores in the cells. For example, using the numbers given in (5), the average number of cells whose z-scores fall into the ranges defined above are shown in the last row of the following table.

Expected Number of Cells whose Z-scores that fall into the range
80 Active Cells

Disparity Level	Total No. of Cells	Range of Z-score				
		< -3.01	-3.01 to -2.34	-2.33 to -1.66	-1.65 to -1.04	>-1.04
Better Than	26.67	0.01	0.06	0.36	1.23	25.02
None	26.67	0.03	0.23	1.06	2.66	22.69
Medium	0	0.00	0.00	0.00	0.00	0.00
Severe	26.67	1.75	3.67	6.32	6.32	8.61
Total	80	1.79	3.96	7.74	10.21	56.32

From this one can determine the dollar amount of the penalties that would be assign. If this is done for each of the 15 distribution, we will get a good idea of the possibilities for a single month.

We also need to determine how the disparity distributions occur over time. AT&T's model needs to have the same distribution for each month; however, AT&T could probably change the distribution by quarter, as long as there's not a drastic change between two consecutive quarters. Below of five examples of how this will be done.

Examples:

	Distribution Number			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Stationary	8	8	8	8
Almost Stationary	4	5	6	7
Almost Stationary	9	10	11	12
Improving	15	13	11	9
Degrading	1	3	5	7

BST Implementation of Assumptions for Parity Tests

A test failure occurs when the truncated Z statistic is less than the balancing critical value.

$$Z^T < c_B$$

When this occurs, the remedy payment is calculated as

(Negatively Impacted CLEC transactions)(Volume Proportion)*(Per Transaction Fee)*

where the

- "*Negatively Impacted CLEC transactions*" is the total of all CLEC transactions in like-to-like cells with negative Z-scores
- "*Volume Proportion*" is 1 when the "*parity gap,*" the distance between Z^T and c_B, is greater than 4, and ¼ the "*parity gap*" otherwise.

$$\text{Vol\_Prop} = \min(\tfrac{1}{4}\text{Par\_Gap}, 1)$$

$$\text{Par\_Gap} = \left|Z^T - c_B\right|$$

- "*Per Transaction Fee*" is defined in BellSouth's VSEEM III proposal, and depends on the remedy tier and the submeasure.

To determine the average remedy payout, we calculate the expected value of the 3 components in the remedy payment equation, multiply them together, and multiply the result by the probability that the truncated Z is less than the balancing critical value.

E(Neg_CLEC_Trans)*E(Vol_Prop)*E(Trans_Fee)*P($Z^T < c_B$)

These factors are calculated as follows.

- **$P(Z^T < c_B)$**

Z^T is assumed to be normally distributed, so the calculation of this probability depend on the mean and variance of Z^T and the value of c_B.

Mean of Z^T. Recall that

$$Z^T = \frac{\sum_j w_j (Z_j^* - E(Z_j^* \mid H_0))}{\sqrt{\sum_j w_j^2 \mathrm{Var}(Z_j^* \mid H_0)}} = \frac{\sum_j w_j (Z_j^* + \frac{1}{\sqrt{2\pi}})}{\sqrt{\left(\frac{1}{2} - \frac{1}{2\pi}\right)\sum_j w_j^2}}$$

The expected value is therefore

$$E(Z^T) = \frac{\left(E(Z^*) + \frac{1}{\sqrt{2\pi}}\right)}{\sqrt{\left(\frac{1}{2} - \frac{1}{2\pi}\right)}} \frac{\sum_j w_j}{\sqrt{\sum_j w_j^2}}$$

When the transaction volume is similar across all cells, then the cell weights are approximately equal, and it can be shown that

$$\frac{\sum_j w_j}{\sqrt{\sum_j w_j^2}} \approx \sqrt{\text{Num\_Active\_Cells}}$$

To calculate $E(Z^*)$, recall that Z^* is a normal random variable truncated at 0. Its mean and variance is given by

$$M(\mu,\sigma) = \mu\,\Phi(\tfrac{-\mu}{\sigma}) - \sigma\,\phi(\tfrac{-\mu}{\sigma})$$

and

$$V(\mu,\sigma) = (\mu^2+\sigma^2)\Phi(\tfrac{-\mu}{\sigma}) - \mu\sigma\,\phi(\tfrac{-\mu}{\sigma}) - M(\mu,\sigma)^2$$

where $\Phi(\cdot)$ is the cumulative standard normal distribution function, and $\phi(\cdot)$ is the standard normal density function. The parameters m and s are the mean and variance of the underlying normal distribution. The mean of a cell Z-score is defined as

$$m_D = \begin{cases} 0.5 & D=1 \quad \text{(better than)} \\ 0 & D=2 \quad \text{(parity)} \\ -0.75 & D=3 \quad \text{(medium)} \\ -1.5 & D=4 \quad \text{(severe)} \end{cases}$$

and the variance is defined as 1.

The unconditional expected value of Z^* is

$E(Z^*)$ = M(0.5,1)P(D=1) + M(0,1)P(D=2) + M(-0.75,1)P(D=3) + M(-1.5,1)P(D=4)

= (-0.198)P(D=1) + (-0.399)P(D=2) +(-0.881)P(D=3)+ (-1.53)P(D=4)

For example, with disparity distribution 8, each disparity level has a 25% chance of occurring.

$E(Z^*)$ = (-0.198)(0.25) + (-0.399)(0.25) +(-0.881)(0.25)+ (-1.53)(0.25) = -0.752

For the purpose of this exercise, Provisioning Resale POTS, has 80 like-to-like cells. Assuming 80% of these are active, we get

$$E(Z^T) = \frac{\left(E(Z^*) + \frac{1}{\sqrt{2\pi}}\right)}{\sqrt{\left(\frac{1}{2} - \frac{1}{2\pi}\right)}}\sqrt{0.8(80)} = \frac{-0.752 + 0.399}{.582}\sqrt{64} = -4.852$$

Variance of Z^T. It can be shown that

$$\text{Var}(Z^T) = \frac{\text{Var}\left(Z^* + \frac{1}{\sqrt{2\pi}}\right)}{\left(\frac{1}{2} - \frac{1}{2\pi}\right)}\frac{\sum_j w_j^2}{\sum_j w_j^2} = \frac{\text{Var}(Z^*)}{\left(\frac{1}{2} - \frac{1}{2\pi}\right)}$$

and

$$\mathrm{Var}(Z^{\bullet}) = \mathrm{E}(\mathrm{Var}(Z^{\bullet} \mid \mathrm{D})) + \mathrm{Var}(\mathrm{E}(Z^{\bullet} \mid \mathrm{D}))$$

where

$$\mathrm{E}(\mathrm{Var}(Z^{\bullet} \mid \mathrm{D})) = \sum_{d=1}^{4} \mathrm{V}(m_d, 1)\mathrm{P}(\mathrm{D} = d)$$

$$\mathrm{Var}(\mathrm{E}(Z^{\bullet} \mid \mathrm{D})) = \sum_{d=1}^{4} \mathrm{M}(m_d, 1)^2 \mathrm{P}(\mathrm{D} = d) - \mathrm{E}(Z^{\bullet})^2$$

For example, with disparity distribution 8, $\mathrm{Var}(Z^{\bullet}) = 0.778$. Therefore,

$$\mathrm{Var}(Z^{\mathrm{T}}) = = \frac{0.778}{\left(\frac{1}{2} - \frac{1}{2\pi}\right)} = 2.281$$

Balancing Critical Value. c_B is determine by the ILEC and CLEC transaction volumes, n_1 and n_2, and the parameter of the alternative hypothesis parameter. For this exercise we have the 2003 forecast for the combined CLEC transaction volume, which is divided by the number of CLECs (50) to get n_2. The ILEC volume is approximated as 14.5 times the CLEC value. This is approximately what is seen in the June '99 and September '99 data.

An approximation to the balancing critical value of a mean measure for an alternative with $\delta = 1$ is used for the balancing critical value formula for all performance measures.

$$c_B = \frac{-1}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} = -\sqrt{\frac{14.5 n_2}{15.5}}$$

This is generally more extreme than the value obtained from the formula given in Appendix C of the Statistician's Report. This means that $\mathrm{P}(Z^{\mathrm{T}} < c_B)$ is underestimated, and therefore the expected remedy payout is underestimated.

The probability of failing the parity test for a disparity distribution is calculated by finding the area to the left of c_B under a normal density with mean $\mathrm{E}(Z^{\mathrm{T}})$ and variance $\mathrm{Var}(Z^{\mathrm{T}})$. For the June 2003 resale POTS provisioning transaction forecast of 2073 total CLEC transactions, the balancing critical value for one of the 50 CLECs is

$$c_B = -\frac{1}{2}\sqrt{\frac{14.5\left(\frac{2073}{50}\right)}{15.5}} = -3.114$$

Under disparity distribution 8, the mean of Z^{T} is -4.852 with a variance of 2.281. Hence,

$$\mathrm{P}(Z^{\mathrm{T}} < c_B) = 0.873.$$

- **E(Neg_CLEC_Trans)**

$$E(Neg\_CLEC\_Trans) = \sum_j n_{2j} P(Z_j < 0) = P(Z < 0)\sum_j n_{2j} = P(Z < 0)\, n_2$$

where

the sum is over the active like-to-like cells

n_{2j} is the number of CLEC transactions in like-to-like cell j

n_2 is the total number of CLEC transactions

$$P(Z < 0) = \sum_{d=1}^{4} P(Z < 0 \mid Disp\_Lev = d) P(Disp\_Lev = d)$$

Disp_Lev is one of the four disparity levels

Example: For disparity distribution number 8, each disparity level has a 25% chance of occurring.

$$P(Z < 0 \mid Disp\_Lev = 1) = 0.309$$
$$P(Z < 0 \mid Disp\_Lev = 2) = 0.50$$
$$P(Z < 0 \mid Disp\_Lev = 3) = 0.773$$
$$P(Z < 0 \mid Disp\_Lev = 4) = 0.933$$

Which are calculate using the fact that Z is normally distributed with standard deviation 1 and mean 0.5, 0, -0.75, and -1.5 for disparity distributions (1) better than, (2) parity, (3) medium disparity, and (4) severe disparity, respectively. So

$$P(Z < 0) = (.309)(.25) + (.5)(.25) + (.773)(.25) + (.933)(.25) = 0.629$$

The June 2003 resale POTS provisioning transaction forecast is 2073 total CLEC transactions. If there are 50 CLECs, and they each have about the same number of transactions, then

$$E(Neg\_CLEC\_Trans) = .629\left(\frac{2073}{50}\right) = 26.078.$$

➢ E(Vol_Prop)

For the Vol_Prop to be greater than 0, $Z^T < c_B$. Given that this is the case,

$$E(Vol\_Prop) = \begin{cases} 1 & c_B - E(Z^T \mid Z^T < c_B) > 4 \\ \frac{1}{4}\left[c_B - E(Z^T \mid Z^T < c_B)\right] & \text{otherwise} \end{cases}$$

The balancing critical value is calculated as above, and

$$E(Z^T \mid Z^T < c_B) = \frac{M(E(Z^T), Var(Z^T), c_B)}{P(Z^T < c_B)}$$

where

$$M(\mu, \sigma, c) = \mu\,\Phi\left(\tfrac{c-\mu}{\sigma}\right) - \sigma\,\phi\left(\tfrac{c-\mu}{\sigma}\right)$$

Φ and ϕ are defined above.

Using the results from the examples above,

$$c_B = -3.114,$$
$$E(Z^T) = -4.852,$$
$$Var(Z^T) = 2.281, \text{ and}$$
$$P(Z^T < c_B) = 0.873.$$

In which case,

$$M(-4.852, 1.510, -3.114) = -4.557,$$
$$E(Z^T \mid Z^T < c_B) = \frac{-4.557}{0.873} = -5.220, \text{ and}$$
$$E(Vol\_Prop) = \tfrac{1}{4}(-3.114 + 5.220) = 0.527.$$

➢ E(Trans_Fee)

For the first month in a scenario, the Tier I transaction fee depends on the product (POTS or UNE). The same is true for any Tier II quarter transaction fee. But for the second and subsequent months, the Tier I transaction fee depends on the number of consecutive failures (up to 6) that occur, as well as the product.

Let p_i denote the probability of failing the performance measure test in month i, and $q_i = (1-p_i)$ denote the probability of passing the test in month i. Then the expected transaction fee for month s given that there is a failed test in month s is

$$\sum_{t=1}^{s} q_{s-t}^{I\{t<s\}} \left(\prod_{i=s-t+1}^{s-1} p_i \right) F(t, Prod) \qquad \text{for month } s = 2, \ldots, 6$$

$$\sum_{t=s-5}^{s} q_{s-t+2}^{I\{t<s\}} \left(\prod_{i=s-t+3}^{s-1} p_i \right) F(t-s+6, Prod) \qquad \text{for month } s > 6$$

where F(t, Prod) is the VSEEM III remedy fee for product "Prod" when t consecutive Tier I failures have occurred. I{t < s} is 1 if t < s and 0 otherwise. If the upper limit in the product is less than the lower limit, then set the product equal to 1.

Once all the components are calculated, we can calculate the remedy payment for a particular measure type and month as

E(Neg_CLEC_Trans)*E(Vol_Prop)*E(Trans_Fee)*$P(Z^T < c_B)$

Following the example above for a resale POTS provisioning performance measure in June 2003 with one of the 50 CLECs, we get a remedy payment of

Remedy Payment = (26.078)(0.527)($100)(0.873) = $ 1,199.77.

Over the 50 CLECs this would total $ 59,988.66. There are three Tier I resale POTS provisioning measures, so the total expected remedy payment for these measures is $ 179,965.97.

ASSUMPTIONS TO BE USED IN DEVELOPING ENFORCEMENT IMPACTS

(Usable for Benchmark Measurements)

The assumptions used for Parity measurements do not directly correlate to assumptions needed for benchmark measures. BellSouth utilizes the disparity distributions 1 through 15 (on page 1) to assess benchmark performance, as well as some predefined level of failures. The disparity distribution table is assumed to be the distribution of performance for individual CLECs and CLECs in the aggregate.

Benchmark Discrepancy Definition

- Benchmark vs. Actual - Discrepancy is better than expected corresponds to a CLEC value exceeding the benchmark. This is modeled using a hypothetical 99% within 'x' target.
- Benchmark vs. Actual – No Discrepancy corresponds to a hypothetical 95% within 'x' target.
- Benchmark vs. Actual – Moderate Discrepancy corresponds to a moderate level of failure than allowed by benchmark. This is modeled using a hypothetical 85% within 'x' target.
- Benchmark vs. Actual – A Severe Discrepancy corresponds to a high level of failure than allowed by the benchmark. This is modeled using a hypothetical benchmark of 75% within 'x' target.

For measures captured in terms of proportional success or failure, the following table is used:

Discrepancy Levels	Benchmarks	
Better Than Expected	6%	1%
No Discrepancy	10%	5%
Moderate Discrepancy	20%	15%
Severe Discrepancy	30%	25%

BST Implementation of Assumptions for Benchmark Measures

There a two types of benchmarks in the VSEEM III SQM; those in the form of a target, and proportions. The 'decision to pay' is based on the failure to meet the benchmark. The payment amount is calculated by

*(Affected Volume) * (Per Transaction Fee)*
*where, Affected Volume is (Volume Proportion) * (CLEC Volume)*

For both types of benchmarks, the resultant performance is calculated by taking each discrepancy level multiplied by the disparity level specified in the disparity distribution (1 –15). For example: Using disparity distribution number 8 on page 1

The following method is used to assess a benchmark in the form of a target (e.g., FOC, 95% complete within 4hours):
.25(.99) + .25(.95) + .25(.85) + .25(.75) = .885 (or 88.5%). This would be deemed a failure; since only 88.5% was complete within 4hours. Hence, the decision to pay.

The following method is used to assess a proportional benchmark (e.g., Missed Appointments, 10%):
.25(.06) + .25(.10) + .25(.20) + .25(.30) = .165 (or 16.5%). This would be deemed a failure; since the benchmark was missed by 6.5%. Hence, the decision to pay.

In the Scenarios laid out by the LPSC , the pay decisions are:

Pay Decision	Q1	Q2	Q3	Q4
Scenario #1	Pay	Pay	Pay	Pay
Scenario #2	Pay	Pay	Pay	Pay
Scenario #3	Pay	Pay	Pay	Pay
Scenario #4	Pay	Pay	Pay	Pay
Scenario #5	OK	OK	Pay	Pay

➢ Volume Proportion

Recognizing that discrepancies did not occur on all activity, the proportion of volume subject to remedies is determined. For those measures in the form of a target (e.g., FOC and Reject Interval), the Volume Proportion is determined by taking 100% - Actual Performance result. In the case of proportional measures (e.g., Missed Installation and Repair Appointments), Volume Proportion is calculated as the Actual Performance Result - Benchmark Percentage. For example:

Benchmark of "95% within 4 hours"
Actual Performance result of 88.5%
Volume Proportion is 11.5% (100% - 88.5%)

and

Benchmark of "10%"
Actual Performance result 15%
Volume Proportion is 5% (15% - 10%)

➢ 2003 Forecast Volumes

LA 2003	Volume Basis	Jan	Feb	Mar	Apr	May	Jun
Ordering	LSRs/yr	30702	32237	33849	35541	37318	39184
	LSRs/yr	30702	32237	33849	35541	37318	39184
	Rejects/yr	30702	32237	33849	35541	37318	39184
Provisioning	Resale POTS - Svc Orders/yr	1624	1705	1790	1880	1974	2073
	Resale Design - Svc Orders/yr	300	315	331	348	365	383
	UNE Loop/Port Combos - Svc Orders/yr	5296	5561	5839	6131	6437	6759
	UNE Loops - Svc Orders/yr	2628	2760	2898	3042	3195	3354
	IC Trunks- Svc Orders/yr (ASRs)	12	13	13	14	15	15
Maintenance	Resale POTS - In Service	10749	11287	11851	12443	13066	13719
	Resale Design -In Service	911	957	1004	1055	1107	1163
	UNE Loop/Port Combos -In Service	6018	6319	6635	6967	7315	7681
	UNE Loops - In Service	6946	7293	7657	8040	8442	8864
	IC Trunks- In Service	4391	4611	4842	5084	5338	5605
Billing Invoices	Total Billing	394	414	435	456	479	503
Usage Billing	Total Billing	15151981	15909580	16705059	17540312	18417328	19338194
Trunk Blockage	Blocked Calls (100)/Trunks In Svc	5026	5277	5541	5818	6109	6415
LNP	LNP Service Orders	1682	1766	1854	1947	2044	2146
Coordinated Conversion	UNE LOOPS w/ NP	105	110	116	122	128	134
Collocation	# of Collocations	3	3	3	3	3	4

LA 2003	Volume Basis	Jul	Aug	Sep	Oct	Nov	Dec
Ordering	LSRs/yr	41144	43201	45361	47629	50010	52511
	LSRs/yr	41144	43201	45361	47629	50010	52511
	Rejects/yr	41144	43201	45361	47629	50010	52511
Provisioning	Resale POTS - Svc Orders/yr	2176	2285	2399	2519	2645	2778
	Resale Design - Svc Orders/yr	402	423	444	466	489	514
	UNE Loop/Port Combos - Svc Orders/yr	7097	7452	7825	8216	8627	9058
	UNE Loops - Svc Orders/yr	3522	3698	3883	4077	4281	4495
	IC Trunks- Svc Orders/yr (ASRs)	16	17	18	19	20	21
Maintenance	Resale POTS - In Service	14405	15125	15881	16675	17509	18385
	Resale Design -In Service	1221	1282	1346	1413	1484	1558
	UNE Loop/Port Combos -In Service	8065	8469	8892	9337	9803	10294
	UNE Loops - In Service	9308	9773	10262	10775	11314	11879
	IC Trunks- In Service	5885	6179	6488	6813	7153	7511
Billing Invoices	Total Billing	528	555	582	612	642	674
Usage Billing	Total Billing	20305104	21320359	22386377	23505696	24680981	25915030
Trunk Blockage	Blocked Calls (100)/Trunks In Svc	6735	7072	7426	7797	8187	8596
LNP	LNP Service Orders	2254	2366	2485	2609	2739	2876
Coordinated Conversion	UNE LOOPS w/ NP	141	148	155	163	171	180
Collocation	# of Collocations	4	4	4	4	5	5

- **Affected Volume**

The Affected Volume is defined as the actual number of CLEC transactions that are subject to remedies. It is calculated by multiplying the Volume Proportion by the Forecasted Volume. For example:

Benchmark of "95% within 4 hours"
Affected Volume subject to remedies is 3531; 11.5% of the monthly forecast (30,702)

and

Benchmark of "10%"
Affected Volume subject to remedies is 1535; 5% of the monthly forecast (30,702).

- **Fee Schedule**

Tier-1

PER AFFECTED ITEM						
	Month 1	Month 2	Month3	Month4	Month 5	Month 6
Ordering	$40	$50	$60	$70	$80	$90
Provisioning	$100	$125	$175	$250	$325	$500
Provisioning UNE (Coordinated Customer Conversions)	$400	$450	$500	$550	$650	$800
Maintenance and Repair	$100	$125	$175	$250	$325	$500
Maintenance and Repair UNE	$400	$450	$500	$550	$650	$800
LNP	$150	$250	$500	$600	$700	$800
IC Trunks	$100	$125	$175	$250	$325	$500
Collocation	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000

Tier-2

	Per Affected Item
OSS Pre-Ordering	$20
Ordering	$60
Provisioning	$300
UNE Provisioning (Coordinated Customer Conversions)	$875
Maintenance and Repair	$300
UNE Maintenance and Repair	$875
Billing	$1.00
LNP	$500
IC Trunks	$500
Collocation	$15,000

Once all the components are calculated, we can calculate the remedy payment for a particular measure type and month as

*(Affected Volume) * (Per Transaction Fee)*

LA Remedy Impact Model Results

	Jan	Feb	Mar	Apr	May	Jun
Stationary Scenario #1						
Total Tier-1 Payment	$ 1,685,802	$ 1,983,047	$ 2,431,685	$ 2,837,416	$ 3,285,710	$ 3,984,303
Total Tier-2 Payment			$ 6,302,505			$ 6,943,424
Total Payment	***$ 1,685,802***	***$ 1,983,047***	***$ 8,734,190***	***$ 2,837,416***	***$ 3,285,710***	***$ 10,927,726***
Almost Stationary Scenario #2						
Total Tier-1 Payment	$ 367,579	$ 478,385	$ 653,272	$ 605,146	$ 715,432	$ 838,011
Total Tier-2 Payment			$ 1,608,942			$ 1,506,375
Total Payment	***$ 367,579***	***$ 478,385***	***$ 2,262,214***	***$ 605,146***	***$ 715,432***	***$ 2,344,386***
Almost Stationary Scenario #3						
Total Tier-1 Payment	$ 3,235,855	$ 3,799,323	$ 4,568,523	$ 5,558,286	$ 6,505,450	$ 8,046,065
Total Tier-2 Payment			$ 8,329,774			$ 9,278,153
Total Payment	***$ 3,235,855***	***$ 3,799,323***	***$ 12,898,297***	***$ 5,558,286***	***$ 6,505,450***	***$ 17,324,218***
Improving Scenario #4						
Total Tier-1 Payment	$ 9,079,133	$ 11,046,348	$ 13,664,072	$ 8,342,062	$ 9,991,681	$ 12,662,045
Total Tier-2 Payment			$ 63,999,322			$ 12,553,156
Total Payment	***$ 9,079,133***	***$ 11,046,348***	***$ 77,663,394***	***$ 8,342,062***	***$ 9,991,681***	***$ 25,215,201***
Degrading Scenario #5						
Total Tier-1 Payment	$ 0	$ 0	$ 0	$ 9,001	$ 9,182	$ 9,192
Total Tier-2 Payment			$ 0			$ 73
Total Payment	***$ 0***	***$ 0***	***$ 0***	***$ 9,001***	***$ 9,182***	***$ 9,265***

LA Remedy Impact Model Results

	Jul	Aug	Sep	Oct	Nov	Dec	Year 2003
Stationary Scenario #1							
Total Tier-1 Payment	$ 4,034,644	$ 4,087,474	$ 4,143,922	$ 4,203,019	$ 4,267,549	$ 4,336,857	$ 41,281,429
Total Tier-2 Payment			$ 7,447,843			$ 7,925,561	$ 28,619,332
Total Payment	***$ 4,034,644***	***$ 4,087,474***	***$ 11,591,765***	***$ 4,203,019***	***$ 4,267,549***	***$ 12,262,418***	***$ 69,900,761***
Almost Stationary Scenario #2							
Total Tier-1 Payment	$ 2,147,787	$ 2,297,866	$ 2,468,200	$ 2,158,259	$ 2,282,925	$ 2,411,583	$ 17,424,445
Total Tier-2 Payment			$ 5,300,457			$ 3,807,690	$ 12,223,464
Total Payment	***$ 2,147,787***	***$ 2,297,866***	***$ 7,768,657***	***$ 2,158,259***	***$ 2,282,925***	***$ 6,219,273***	***$ 29,647,909***
Almost Stationary Scenario #3							
Total Tier-1 Payment	$ 12,480,484	$ 13,104,205	$ 13,673,859	$ 10,881,750	$ 10,871,738	$ 10,872,093	$ 103,597,631
Total Tier-2 Payment			$ 14,467,477			$ 13,156,352	$ 45,231,755
Total Payment	***$ 12,480,484***	***$ 13,104,205***	***$ 28,141,336***	***$ 10,881,750***	***$ 10,871,738***	***$ 24,028,445***	***$ 148,829,386***
Improving Scenario #4							
Total Tier-1 Payment	$ 13,952,526	$ 14,121,291	$ 14,317,300	$ 8,678,386	$ 8,422,437	$ 8,292,646	$ 132,569,929
Total Tier-2 Payment			$ 14,467,477			$ 10,703,937	$ 101,723,892
Total Payment	***$ 13,952,526***	***$ 14,121,291***	***$ 28,784,777***	***$ 8,678,386***	***$ 8,422,437***	***$ 18,996,583***	***$ 234,293,821***
Degrading Scenario #5							
Total Tier-1 Payment	$ 350,306	$ 465,299	$ 645,408	$ 1,386,622	$ 1,641,591	$ 1,925,548	$ 6,442,149
Total Tier-2 Payment			$ 1,734,648			$ 3,315,483	$ 5,050,204
Total Payment	***$ 350,306***	***$ 465,299***	***$ 2,380,056***	***$ 1,386,622***	***$ 1,641,591***	***$ 5,241,031***	***$ 11,492,354***

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